

Section 8. Construction Requirements

5-800. General. This Section describes the construction requirements for Closed Areas and vaults. Construction shall conform to the requirements of this Section or, with CSA approval, to the standards of **DCID 1/21** (Manual for Physical Security Standards for Sensitive Compartmented Information Facilities.)

5-S01. Construction Requirements for Closed Areas.

This paragraph specifies the minimum safeguards and standards required for the construction of Closed Areas that are approved for use for safeguarding classified material. These criteria and standards apply to all new construction and reconstruction, alterations, modifications, and repairs of existing areas. They will also be used for evaluating the adequacy of existing areas.

- a. **Hardware.** Only heavy duty builder's hardware shall be used in construction. Hardware accessible from outside the area shall be ~~peened~~, pinned, brazed, or spotwelded to preclude removal.
- b. **Walls.** Construction may be of plaster, gypsum wall-board, metal panels, hardboard, wood, plywood, glass, wire mesh, expanded metal, or other materials offering resistance to, and evidence of, unauthorized entry into the area. If insert-type panels are used, a method shall be devised to prevent the removal of such panels without leaving visual evidence of tampering. If visual access is a factor, area barrier walls up to a height of 8 feet shall be of opaque or translucent construction.
- c. **Windows.** The openings for windows which ~~open~~, that are less than 18 feet from an access point (for example, another window outside the area, ~~roof~~, ledge, or door) shall be fitted with 1/2-inch bars (separated by no more than 6 inches). plus crossbars to prevent spreading, 18 gauge expanded metal, or wire mesh securely fastened on the inside. When visual access of classified information is a factor, the windows shall be covered by any practical method, such as drapes, blinds, or painting or covering the inside of the glass. During nonworking hours, the windows shall be closed and securely fastened to preclude surreptitious entry.
- d. **Doors.** Doors shall be substantially constructed of ~~wow!~~ or metal. When windows, louvers, baffle plates, or similar openings are used. they shall be

secured with 18 gauge expanded metal or with wire mesh securely fastened on the inside. If visual access is a factor, the windows shall be covered. When doors are used in pairs, an **astragal** (overlapping molding) shall be installed where the **doors meet**.

- e. **Door Locking Devices.** Entrance doors shall be secured with either an approved built-in combination lock, an approved combination padlock, or with an approved key-operated padlock. Other doors shall be secured from the inside with a panic bolt (for example, actuated by a panic bar); a dead bolt; a rigid “wood or **metal** bar, (which shall preclude “springing”) which extends across the width of the door and is held in position by solid clamps, preferably on the door casing; or by other means approved by the CSA consistent with relevant fire and safety codes.
- f. **Ceilings.** Ceilings shall be constructed of plaster, gypsum wall board material, panels, hardboard, wood, plywood, ceiling tile, or other material offering similar resistance to and detection of unauthorized entry. Wire mesh, or other non-opaque material offering similar resistance to, and evidence of, unauthorized entry into the area may be used if visual access to classified material is not a factor.
- g. **Ceilings (Unusual Cases).** When wall barriers do not extend to the true ceiling and a false **ceiling** is created, the false ceiling must be reinforced with wire mesh or 18 gauge expanded metal to serve as the true ceiling. When wire mesh or expanded metal is used, it must overlap the adjoining walls and be secured in a manner that precludes removal without leaving evidence of tampering. When wall barriers of an area do extend to the true ceiling and a false ceiling is added, there is no necessity for reinforcing the false ceiling. “When there is a valid justification for not erecting a solid ceiling as part of the area, such as the use of overhead cranes for the movement of bulky equipment within the area, the contractor shall ensure that surreptitious entry cannot be obtained by entering the area over the top of the barrier walls.
- h. **Miscellaneous Openings.** Where ducts, pipes, registers, sewers, and tunnels are of such size and shape as to perm it unauthorized entry, (in excess of **96** square inches in area and over 6 inches in its smallest dimension) they shall he secured by 18 gauge

expanded metal or wire mesh, or, by rigid metal bars 1/2-inch in diameter extending across their width, with a maximum space of 6 inches between the bars. The rigid metal bars shall be securely fastened at both ends to preclude removal and shall have cross-bars to prevent spreading. When wire mesh, expanded metal, or rigid metal bars are used, they must ensure that classified material cannot be removed through the openings with the aid of any type instrument. Expanded **metal**, wire mesh or rigid metal bars are not required if an IDS is used as supplemental protection.

5-802. Construction Required for Vaults. This paragraph specifies the minimum standards required for the construction of vaults approved for use as storage facilities for classified material. These standards apply to **all** new construction and reconstruction, **alterations**, modifications, and repairs of existing vaults. They will also be used for evaluating the adequacy of existing vaults. In addition to the requirements given below, the wall, floor, and roof construction shall be in accordance with nationally recognized standards of structural practice. For the vaults described below, the concrete shall be poured in place, and will have a compressive strength of 2,500 pounds per square inch.

- a. **Floor.** The floor must be a monolithic concrete construction of the thickness of adjacent concrete **floor** construction, but not less than 4 inches thick.
- b. **Walls.** Wall must be not less than 8-inch-thick hollow clay **tile** (vertical cell double shells) or concrete blocks (thick shells). Monolithic steel-reinforced concrete walls at least 4 inches thick may also be used. Where hollow clay tiles are used and such masonry units are flush, or **in** contact with, facility exterior walls, they shall be filled with concrete and steel-reinforced bars. Walls are to extend to the underside of the roof or ceiling above.
- c. **Roof/Ceiling.** The roof or ceiling must be a monolithic reinforced concrete slab of thickness to be determined by structural requirements.
- d. **Vault Door and Frame Unit.** A GSA-approved vault door and frame unit shall be used.
- e. **Miscellaneous Openings.** Omission of all miscellaneous openings is desirable, but not mandatory. Openings of such size and shape as to permit unauthorized entry, (normally in excess of 96 square inches in area and over 6 inches in its smallest dimension) and openings for ducts, pipes, registers, sewers and tunnels shall be equipped with man-safe barriers such as wire mesh, 18 gauge expanded metal, or rigid metal bars of at least 1/2 inch in diameter extending across **their** width with a maximum space of 6 inches between the bars. The rigid metal bars shall be securely fastened at both ends to preclude removal and shall have crossbars to prevent spreading. Where wire mesh, expanded metal, or rigid metal bars are used, care shall be exercised to ensure that classified material within the **vault** cannot be removed with the aid of any type of instrument. Pipes and conduits entering the vault shall enter through walls that are not common to the vault and the structure housing the vault. Preferably such pipes and conduits should be installed when the vault is constructed. If this is not practical, they shall be carried through snug-fitting pipe sleeves cast in the concrete. After installation, the annular space between the sleeve and the pipe or conduit shall be caulked solid with lead, wood, waterproof (silicone) caulking, or similar material, which will give evidence of surreptitious removal.